

# EARTH TIME SCALE – CP

1. For the Earth Time Scale you will need 1 meter of adding machine tape.
2. Draw a line at one end of the tape, about 5cm in from the end. Label this line **The Present**
3. Draw one continuous line from the line you drew in Step 2 down the middle of the tape.
4. From the **Present Line**, plot each **EVENT** and **YEARS AGO** from the following list onto the tape.  
(example: The first event would be placed 0.01 mm from the present line)
5. Draw a minimum of 10 pictures to illustrate the major events.
6. **Label** each of the four **Eras**.
7. Lightly shade the background of each of the four major Eras. To keep consistent with the book, shade Cenozoic tan/light brown; Mesozoic green; Paleozoic yellow; and Precambrian orange.

**Grading:30 points total.** (20 points – followed all directions completely and scale is accurate; 5 points neatness of writing, drawings and shading; 5 points handed in on time)

<u>EVENT</u>	<u>YEARS AGO</u>	<u>PLACEMENT</u>
Last Ice Age	10,000 years	0.01 mm from present line
Glaciers come and go	24,000 years	0.024 mm from present
Continental Ice Sheet covers N. America	1.8 million	1.8 mm from present
Ice age begins – Super large mammals	2 million	2 mm from present
Erosion forms rivers and landscape	16 million	1.6 cm from present
Camels found in North America	20 million	2 cm from present
Cooler, dryer climate in Pennsylvania	24 million	2.4 cm from present
First abundant mammal & birds	60 million	6 cm from present
<b>Beginning of Cenozoic Era</b>	66 million	6.6 cm from present
Dinosaurs die out	66 million	6.6 cm from present
Asteroid collision?	66 million	6.6 cm from present
Gondwanaland separates (Africa & S. America)	135 million	13.5 cm from present
Seafloor spreading occurs between Africa & North America.	150 million	15 cm from present
Ancient birds found	160 million	16 cm from present
Dinosaurs abundant	180 million	18 cm from present
Rocky Mountains form	190 million	19 cm from present

Pangaea breaks up (Gondwanaland & Laurasia) North America moves north slowly. Dinosaurs live in Pennsylvania.	220 million	22 cm from present
<b>Beginning of Mesozoic Era</b>	225 million	22.5 cm from present
Trilobites die out	230 million	23 cm from present
Appalachian Mountains form	280 million	28 cm from present
Continents collide/form Pangaea	280 million	28 cm from present
Swamps existed which later allowed the formation of coal to occur. Marine waters disappeared as sediments filled in the land.	350 million	35 cm from present
First forest fossils (ferns, etc.)	390 million	39 cm from present
PA is close to the equator. Gypsum & Halite form in northwest PA due to hot conditions.	440 million	44 cm from present
Fish abundant	500 million	50 cm from present
Subduction of continental and ocean plates formed Appalachian Basin & clastic sediments were deposited from the East.	500 million	50 cm from present
Trilobites abundant	570 million	57 cm from present
Iapetus Ocean formed east of North America. Water spread inland and covered Pennsylvania.	570 million	57 cm from present
<b>Beginning of Paleozoic Era</b>	600 million	60 cm from present
<b>End of Precambrian</b>	600 million	60 cm from present
Rodinia broke into Laurentia, Baltica & Siberia. North America was part of Laurentia.	725 million	72.5 cm from present
Events during Precambrian: Oxygen created 2.5 <b>billion</b> , Oldest microfossils 3.5 <b>billion</b> , Earth's beginning???? 4.6 <b>billion</b>		